IN THE CLAIMS:

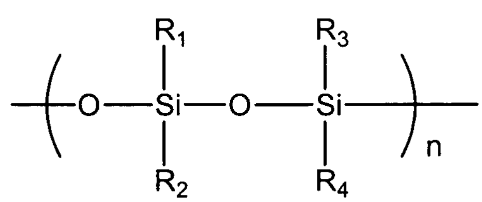
Please amend Claims 5-10, 15-20, 24, 27, 28, 32, 35, and 36, as indicated below. The following is a complete listing of the claims, and replaces all previous versions and listings of claims in the present application.

Claim 1 (Original): A field effect transistor having an organic semiconductor layer, comprising:

an organic semiconductor layer containing at least porphyrin; and

a layer composed of at least a polysiloxane compound, the layer being laminated on the organic semiconductor layer so as to be in intimate contact with the organic semiconductor layer.

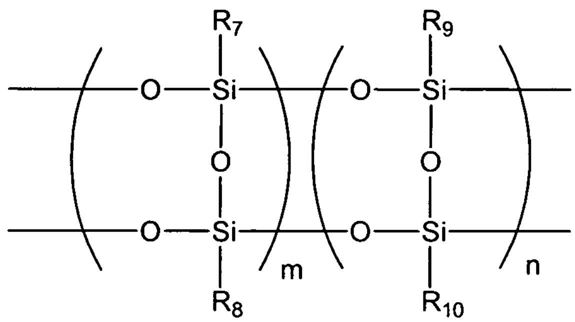
Claim 2 (Original): The field effect transistor according to claim 1, wherein the polysiloxane compound is represented by the following general formula (1): General formula (1)



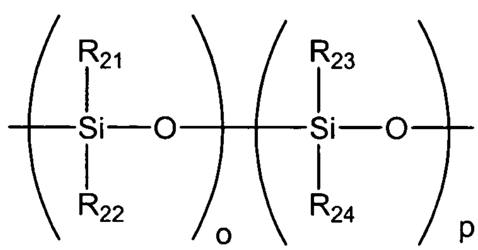
(In the formula, R_1 to R_4 each represent a substituted or unsubstituted alkyl or alkenyl group having 1 to 5 carbon atoms, a substituted or unsubstituted phenyl group, or a siloxane unit. R_1 to R_4may be identical to or different from one another. n represents an integer of 1 or more.).

Claim 3 (Original): The field effect transistor according to claim 1, wherein the polysiloxane compound comprises a polysiloxane compound represented by the following general formula (2) and/or the following general formula (6):

General formula (2)



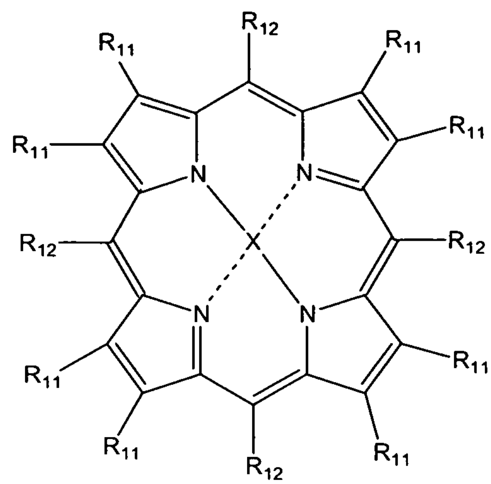
(In the formula, R_7 to R_{10} each represent a substituted or unsubstituted alkyl or alkenyl group having 1 to 5 carbon atoms, or a substituted or unsubstituted phenyl group. R_7 to R_{10} may be identical to or different from one another. m and n each represent an integer of 0 or more, and a sum of m and n is an integer of 1 or more.) General formula (6):



(In the formula, R_{21} to R_{24} each represent a substituted or unsubstituted alkyl or alkenyl group having 1 to 5 carbon atoms, or a substituted or unsubstituted phenyl group. R_{21} to R_{24} may be identical to or different from one another. o and p each represent an integer of 0 or more, and a sum of o and p represents an integer of 1 or more.).

Claim 4 (Original): The field effect transistor according to any one of claims 1 to 3, wherein the porphyrin is represented by the following general formula (3):

General formula (3)



(In the formula, R_{11}'s represent at least one kind selected from the group consisting of a hydrogen atom, a halogen atom, a hydroxyl group, or an alkyl, oxyalkyl, thioalkyl, or alkylester group having 1 to 12 carbon atoms, and R_{11}'s may be identical to or different from one another. In addition, adjacent R_{11}'s may form an aromatic ring which may have a substituent. In addition, the adjacent R_{11}'s may be connected to another porphyrin ring which may have a substituent through the formed aromatic ring. R_{12}'s represent at least one kind selected from the group consisting of a hydrogen atom and an aryl group which may have a substituent. R_{12}'s may be identical to or

different from one another. X represents a hydrogen atom or a metal atom.).

Claim 5 (Currently Amended): The field effect transistor according to ~~any one of claims 1 to~~ claim 4, wherein at least one pair of the adjacent R_{11}'s in the general formula (3) forms an aromatic ring.

Claim 6 (Currently Amended): The field effect transistor according to ~~any one of claims 1 to 5~~ claim 4, wherein the aromatic ring formed by the at least one pair of the adjacent R_{11}'s in the general formula (3) is obtained by heating a precursor having a bicyclo[2.2.2]octadiene skeleton structure which may have a substituent.

Claim 7 (Currently Amended): The field effect transistor according to ~~any one of claims 1 to 6~~ claim 1, wherein Bragg angles (2θ) of CuKα X-ray diffraction in the organic semiconductor layer have peaks at 8.3° ± 0.2°, 10.1° ± 0.2°, 11.8° ± 0.2°, and 14.4° ± 0.2°.

Claim 8 (Currently Amended): The field effect transistor according to ~~any one of claims 1 to 6~~ claim 1, wherein Bragg angles (2θ) of CuKα X-ray diffraction in the organic semiconductor layer have peaks at 8.4° ± 0.2°, 11.9° ± 0.2°, and 16.9° ± 0.2°.

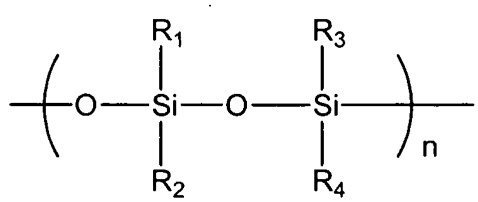
Claim 9 (Currently Amended): The field effect transistor according to ~~any one of claims 1 to 6~~ claim 1, wherein Bragg angles (2θ) of CuKα X-ray diffraction in the organic semiconductor layer have peaks at 7.2° ± 0.2°, 7.8° ± 0.2°, 11.7° ± 0.2°, and 23.5°± 0.2°.

Claim 10 (Currently Amended): The field effect transistor according to ~~any one of claims 1 to 6~~ claim 1, wherein Bragg angles (2θ) of CuKα X-ray diffraction in the organic semiconductor layer have peaks at 7.3°± 0.2°, 7.8°± 0.2°, 11.7° ± 0.2°, and 19.6° ± 0.2°.

Claim 11 (Original): A method of producing a field effect transistor having an organic semiconductor layer, comprising the step of laminating an organic semiconductor layer containing at least porphyrin and a layer composed of at least a polysiloxane compound in such a manner that the layers are in intimate contact with each other.

Claim 12 (Original): The method of producing a field effect transistor according to claim 11, wherein the polysiloxane compound is represented by the following general formula (1):

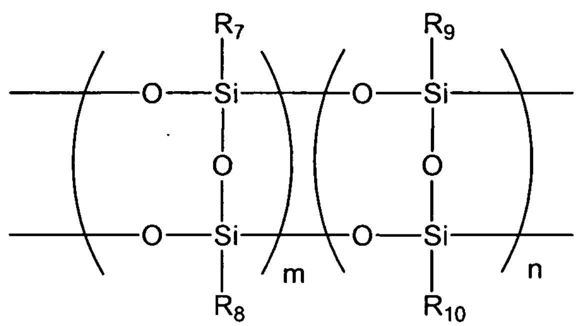
General formula (1)



(In the formula, R_1 to R_4 each represent a substituted or unsubstituted alkyl or alkenyl group having 1 to 5 carbon atoms, a substituted or unsubstituted phenyl group, or a siloxane unit. R_1 to R_4 may be identical to or different from one another. n represents an integer of 1 or more.).

Claim 13 (Original): The method of producing a field effect transistor according to claim 11, wherein the polysiloxane compound comprises a polysiloxane compound represented by the following general formula (2) and/or the following general formula (6):

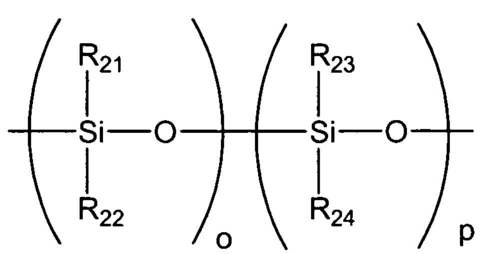
General formula (2)



(In the formula, R_7 to R_{10} each represent a substituted or unsubstituted alkyl or alkenyl group

having 1 to 5 carbon atoms, or a substituted or unsubstituted phenyl group. R_7 to R_{10} may be identical to or different from one another. m and n each represent an integer of 0 or more, and a sum of m and n is an integer of 1 or more.)

General formula (6)

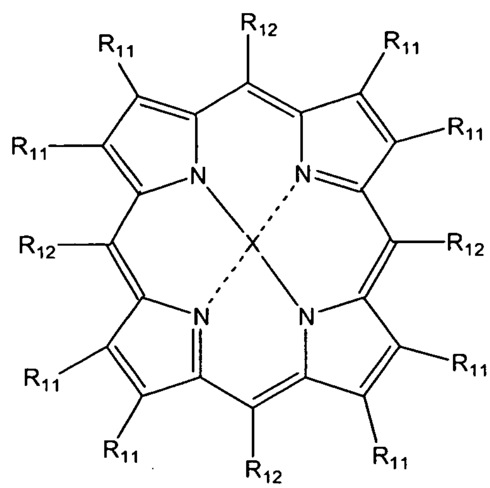


(In the formula, R_{21} to R_{24} each represent a substituted or unsubstituted alkyl or alkenyl group having 1 to 5 carbon atoms, or a substituted or unsubstituted phenyl group. R_{21} to

R_{24} may be identical to or different from one another. o and p each represent an integer of 0 or more, and a sum of o and p is an integer of 1 or more.).

Claim 14 (Original): A method of producing a field effect transistor according to any one of claims 11 to 13, wherein the porphyrin is represented by the following general formula (3):

General formula (3)



(In the formula, R_{11}'s represent at least one kind selected from the group consisting of a hydrogen atom, a halogen atom, a hydroxyl group, or an alkyl, oxyalkyl, thioalkyl, or alkylester group having 1 to 12 carbon atoms, and R_{11}'s may be identical to or different from one another. In addition, adjacent R_{11}'s may form an aromatic ring which may have a substituent. In addition, the adjacent R11's may be connected to a porphyrin ring which may have a substituent through the formed aromatic ring. R_{12}'s represent at least one kind selected from the group consisting of a hydrogen atom and an aryl group which may have a

substituent. R_{12}'s may be identical to or different from one another. X represents a hydrogen atom or a metal atom.).

Claim 15 (Currently Amended): The method of producing a field effect transistor according to ~~any one of claims 11 to~~ claim 14, wherein at least one pair of the adjacent R_{11}'s in the general formula (3) forms an aromatic ring.

Claim 16 (Currently Amended): The method of producing a field effect transistor according to ~~any one of claims 11 to 15~~ claim 14, wherein the aromatic ring formed by the at least one pair of the adjacent R_{11}'s in the general formula (3) is obtained by heating a precursor having a bicyclo[2.2.2]octadiene skeleton structure which may have a substituent.

Claim 17 (Currently Amended): The method of producing a field effect transistor according to ~~any one of claims 11 to 16~~ claim 11, wherein Bragg angles (2θ) of CuKα X-ray diffraction in the organic semiconductor layer form peaks at 8.3° ± 0.2°, 10.1° ± 0.2°, 11.8° ± 0.2°, and 14.4° ± 0.2°.

Claim 18 (Currently Amended): The method of producing a field effect transistor according to ~~any one of claims 11 to 16~~ claim 11, wherein Bragg angles (2θ) of CuKα X-ray diffraction in the organic semiconductor layer form peaks at 8.4° ± 0.2°, 11.9° ± 0.2°, and 16.9° ± 0.2°.

Claim 19 (Currently Amended): The method of producing a field effect transistor according to ~~any one of claims 11 to 16~~ claim 11, wherein Bragg angles (2θ) of CuKα X-ray diffraction in the organic semiconductor layer form peaks at $7.2° \pm 0.2°$, $7.8° \pm 0.2°$, $11.7° \pm 0.2°$, and $23.5° \pm 0.2°$.

Claim 20 (Currently Amended): The method of producing a field effect transistor according to ~~any one of claims 11 to 16~~ claim 11, wherein Bragg angles (2θ) of CuKα X-ray diffraction in the organic semiconductor layer form peaks at $7.3° \pm 0.2°$, $7.8° \pm 0.2°$, $11.7° \pm 0.2°$, and $19.6° \pm 0.2°$.

Claim 21 (Original): A method of producing a laminated member having an organic semiconductor layer, comprising the steps of:

providing a crystallization promoting layer on a substrate;

providing an organic semiconductor precursor on the crystallization promoting layer; and

applying energy to the organic semiconductor precursor to form a layer composed of an organic semiconductor.

Claim 22 (Original): The method of producing a laminated member according to claim 21, wherein the crystallization promoting layer has a function of promoting bonding between crystal grains.

Claim 23 (Original): The method of producing a laminated member according to claim 21 or 22, wherein the energy comprises light energy or heat energy.

Claim 24 (Currently Amended): The method of producing a laminated member according to ~~any one of claims 21 to 23~~ claim 21, wherein the step of applying energy to the organic semiconductor precursor to form the layer composed of the organic semiconductor includes a step of allowing the organic semiconductor precursor to cause an elimination reaction.

Claim 25 (Original): The method of producing a laminated member according to claim 24, wherein the elimination reaction comprises a retro Diels-Alder reaction.

Claim 26 (Original): The method of producing a laminated member according to claim 24 or 25, wherein the energy is continuously applied even after completion of the elimination reaction.

Claim 27 (Currently Amended): The method of producing a laminated member according to ~~any one of claims 21 to 26~~ claim 21, wherein the step of providing the organic semiconductor precursor comprises a step of applying or printing a solution containing the organic semiconductor precursor.

Claim 28 (Currently Amended): The method of producing a laminated member according to ~~any one of claims 21 to 27~~ claim 21, wherein the crystallization promoting layer contains a polysiloxane compound.

Claim 29 (Original): A method of producing a field effect transistor having an organic semiconductor layer, comprising the steps of:

forming a crystallization promoting layer on a substrate;

providing an organic semiconductor precursor on the crystallization promoting layer; and

providing energy to the organic semiconductor precursor to form the organic semiconductor layer.

Claim 30 (Original): The method of producing a field effect transistor according to claim 29, wherein the crystallization promoting layer has a function of promoting bonding between crystal grains.

Claim 31 (Original): The method of producing a field effect transistor according to claim 29 or 30, wherein the energy comprises light energy or heat energy.

Claim 32 (Currently Amended): The method of producing a field effect transistor according to ~~any one of claims 29 to 31~~ claim 29, wherein the step of applying energy to the organic semiconductor precursor to form a layer composed of an organic

semiconductor includes a step of allowing the organic semiconductor precursor to cause an elimination reaction.

Claim 33 (Original): The method of producing a field effect transistor according to claim 32, wherein the elimination reaction comprises a reverse Diels-Alder reaction.

Claim 34 (Original): The method of producing a field effect transistor according to claim 32 or 33, wherein the energy is continuously applied even after completion of the elimination reaction.

Claim 35 (Currently Amended): The method of producing a field effect transistor according to ~~any one of claims 29 to 34~~ claim 29, wherein the step of providing the organic semiconductor precursor comprises a step of applying or printing a solution containing the organic semiconductor precursor.

Claim 36 (Currently Amended): The method of producing a field effect transistor according to ~~any one of claims 29 to 35~~ claim 29, wherein the crystallization promoting layer contains a polysiloxane compound.

Claim 37 (Original): A field effect transistor having an organic semiconductor layer, comprising:

a substrate;

a crystallization promoting layer on the substrate; and

the organic semiconductor layer in contact with the crystallization promoting layer.